tion of chest pain and/or ST-segment elevation when myocardial blood-flow is restored, is frequent during primary PTCA for acute myocardial infarction (AMI). However, its prognostic value is unclear.

Methods: Twenty-two pts with < 12-hr AMI treated by primary PTCA were studied. Coronary velocity reserve (CVR) in the infarct zone was measured following PTCA using a Doppler guidewire and intracoronary adenosine (18 μg). At d8, LV ejection fraction (LVEF) and end-systolic volume (LVESV) were measured by contrast ventriculography, and infarct size was evaluated by rest ^{201}Tl-SPECT (% defect).

Results. PTCA was successful in each case. At d0, pts with RS (9/22) had a lower CVR than pts w/o RS (1.3 ± 0.3 vs 1.7 ± 0.2, p = 0.006). The improvement of CVR between d0 and d8 was significantly better in the former (88.6 ± 43.7% vs 29.7 ± 19.9%, p = 0.02), resulting in similar CVRs at d8 in pts with and w/o RS (2.2 ± 0.6 vs 2.2 ± 0.3, NS). However, at d8, infarct size (22.2 ± 9.3% vs 11.4 ± 8.2%, p = 0.03) and LVESV (78.7 ± 13.8 ml vs 51.3 ± 20.3 ml, p = 0.01) were larger and LVEF was lower (44.8 ± 8.8% vs 50.0 ± 7%, p = 0.008) in pts with RS than in pts w/o RS.

Conclusion: RS is associated with a transient impairment of the microvasculature but with a sustained LV dysfunction and larger infarct size

3:00

816-5 Comparison of Qualitative Bedside and Laboratory Performed Cardiac Markers in Patients With Chest Pain in the Emergency Department

R. Fromm, D. Moyer, A. Boudreaux, J. Zimmerman, C.-C. Wun, B. Davis, R. Smalling, G. Habib, R. Roberts. *Baylor College of Medicine and University of Texas Health Science Center, Houston, TX, USA*

Background: Serum markers performed in the laboratory are routinely used and essential for the confirmation of myocardial infarction (MI). Delays inherent in performing these tests often result in inappropriate hospital admissions and potentially delayed or inappropriate treatments. Thus, the need for an accurate, simple, diagnostic marker for MI that can be performed rapidly and conveniently at the bedside as a screening test in the Emergency Department in the early hours after onset of chest pain.

Methods: A prospective multicenter, double blind study was performed in 955 patients with chest pain admitted consecutively to the Emergency Department. The diagnostic sensitivity and specificity of qualitative assays for myoglobin (MG), CK MB, and troponin T (TNT) determined on serial whole blood samples (q1h, q2hx3, q4hx5), at the bedside were compared to the results of laboratory based assays for CK MB subforms, myoglobin, CK MB mass, troponin I and T performed on the same samples.

Results: One or more qualitative assays were performed in 927 patients. MI was confirmed in 119 by CK MB mass and unstable angina (UA) in 203 by clinical criteria.

Sensitivity

Marker	2 hr	4 hr	6 hr	8 hr
MG	25%	65%	75%	81%
CK MB	19%	57%	66%	81%
TNT	13%	14%	29%	50%

Specificity

Marker	2 hr	4 hr	6 hr	8 hr
MG	84%	90%	86%	84%
CK MB	91%	92%	90%	90%
TNT	100%	95%	96%	100%

Conclusions: MG, CK MB and TNT are highly specific but desirable sensitivity is only reached at 8 hr for MG and CK MB.

3:15

816-6 Characteristics, Management and Prognosis of Very Young Patients After Acute Myocardial Infarction in the Pre- and Thrombolytic Eras

S. Behar, S. Gottlieb, E. Kaplinsky. *Neufeld Cardiac Research Institute, Sheba Medical Center, Tel Hashomer, Israel*

Young patients (pts) are treated more aggressively than older counter-parts after acute myocardial infarction (AMI) in the thrombolytic era. However, the impact of this strategy on the prognosis of young pts compared with the prethrombolytic era is uncertain. We compared two cohorts of very young pts after AMI (≤ 40 years), hospitalized in the same CCUs in the '80s and '90s respectively.

The 7, 30 and 365 day mortality was 0.6, 0.6 and 1.3% in the '80s vs. 1.1, 1.1 and 3.2% in the '90s respectively.

Conclusions: The characteristics of the two cohorts of young pts after AMI were similar. Reperfusion and other therapies more intensively used in the '90s did not influence the early and intermediate prognosis of these pts in comparison with the '80s. Their impact on late prognosis remains to be established.

	1981–83 (n = 157)	1992–96 (n = 95)
Men	92%	93%
Mean age	36 yrs	36 yrs
Prior MI	7%	10%
Diabetes	5%	5%
Smokers	76%	71%
Killip >2	6%	6%
Aspirin	3%	92%
Thrombolysis	-	56%
β-Blockers	19%	59%
Coronary angio	1%	53%
PTCA/CABG	-	4%

817 Percutaneous Balloon Mitral Valvuloplasty

Monday, March 30, 1998, 2:00 p.m.–3:30 p.m.
Georgia World Congress Center, Room 254W

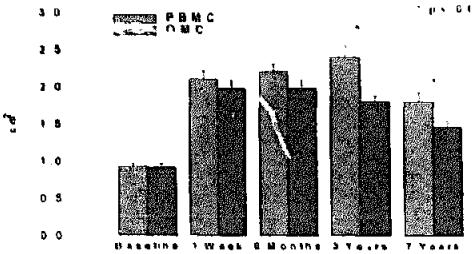
2:00

817-1 Percutaneous Balloon Mitral Commissurotomy is Superior to Open Surgical Commissurotomy at Long Term Follow-up

Z.G. Turi, B.S. Raju, S. Farkas, P.R. Raju, P. Farkas, S. Kapoor, K. Reddy, B.S. Fromm, J. Wynne. *MediCiti:CARE Hospitals Hyderabad, India and Wayne State University, Detroit, MI, USA*

Background: We previously demonstrated similar short and intermediate results of a randomized comparison of percutaneous balloon (PBMC, n = 30) vs open (OMC, n = 30) mitral commissurotomy.

Methods: Follow-up, including cardiac catheterization, was obtained at 1 week, 6 months, 3 years and 7 years in all patients.



Results: At both 3 year and 7 year follow-up, PBMC was superior to OMC. Restenosis occurred in 31% of PBMC and 33% of OMC patients. There was progressive loss of the initial gain, despite redilatation of patients with restenosis.

Conclusion: In patients with favorable mitral valve anatomy, PBMC is safe, effective, and hemodynamically superior to OMC.

2:15

817-2 Ten-Year Results of Percutaneous Mitral Commissurotomy in a Series of 1024 Patients

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Background. Percutaneous mitral commissurotomy is a widely used technique, but results have not been reported at 10 years.

Methods. Follow-up concerned 1024 consecutive patients (pts) who underwent PMC between 1986 and 1995. Mean age was 49 ± 14 yrs [13–86]; 787 pts (77%) were in NYHA class III or IV, and 408 (40%) were in atrial fibrillation. Echocardiography showed that 141 pts (14%) had pliable valves and mild subvalvular disease, 569 (55%) had extensive subvalvular disease, while 314 (31%) had calcified valves. A single balloon was used in 26 pts, a double-balloon in 390, and the Inoue balloon in 608. Good immediate results (IR), defined as valve area (VA) ≥1.5 cm^2 without mitral regurgitation (MR) ≤2/4, were obtained in 912 patients (89%).

Results: Follow-up was completed in 990 pts (97%); mean follow-up was 52 ± 30 months [1 to 132]. The 10-year actuarial results were: survival in 80 ± 11%, survival without operation in 63 ± 6%; and survival without operation and with persistent good functional results (GFR) (NYHA class I or II) in 54 ± 10%. In the 912 pts with good IR, the 10-year rate of GFR was 63 ± 9%. A